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(54) **SUBMARINE BOW DOME ACOUSTIC
SENSOR ASSEMBLY**

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367/119; 367/141; 367/149**

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181/0.5, 139-142; 367/97, 103, 138, 119,
128, 141, 149; 73/587, 620, 640, 645**

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ABSTRACT

A submarine bow dome acoustic sensor assembly comprises an outer hull bow portion, an inner pressure hull wall extending athwartships and in conjunction with the outer hull bow portion defining a free-flood compartment, and an acoustic bow panel disposed in the compartment and connected to the pressure hull wall by acoustically isolating supports. A laser scanner is disposed in the compartment and is oriented so as to project a laser beam onto a surface of the acoustic bow panel, and a sensor is disposed in the compartment and oriented so as to receive reflections of the laser beam off the acoustic panel and to transmit data from which a position of a sound generating source can be determined.

14 Claims, 3 Drawing Sheets

